Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	NMR and "N15-Bcl-XL"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L2	1	"N15-Bcl-XL"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L3	85	"TCTP"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L4	7	"TCTP" and Bcl-2	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L5	7	"TCTP" and Bcl-2	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L6	1	"TCTP" and Bcl-2 and "13C labeling"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L7	7	"TCTP" and Bcl-2 and protein	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:46
L8	159	Bcl-XL and Bcl-2 and NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 10:06
L9	740	"Bcl-XL" or "Bcl-2" same NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:47
L10	740	"Bcl-XL" or "Bcl-2" same NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:47
L11	45	bcl-2 and BH3 same antibody	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:47
L12	16	Bcl-XL and Bcl-2 and NMR and 530/350.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48

L13	2	Bcl-XL and Bcl-2 and NMR and 530/327.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48
L14	2	Bcl-XL and Bcl-2 and NMR and 530/326.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48
L15	1	Bcl-XL and Bcl-2 and NMR and 514/617.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48
L16	9	Bcl-XL and Bcl-2 and NMR and 514/12.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48
L17	10	Bcl-XL and Bcl-2 and NMR and 435/7.1.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:48
L18	3	Bcl-XL and Bcl-2 and NMR and 530/388.8.ccls.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 10:06
S1	1	NMR and "N15-Bcl-XL"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 15:20
S2	1	"N15-Bcl-XL"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 15:30
S3	76	"TCTP"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 15:31
S4	4502	"TCTP" or TR3	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 15:31
S5	7	"TCTP" and Bcl-2	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 15:31
S6	4	"TCTP" and Bcl-2 and measuring	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 16:03

S7	1	"TCTP" and Bcl-2 and "13C labeling"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 16:03
S8	1	"TCTP" and Bcl-2 and "13C"	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/05 16:03
S9	7	"TCTP" and Bcl-2 and protein	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/08 12:01
S10	117	Bcl-XL and Bcl-2 and NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2005/08/16 09:47
S11	117	"Bcl-XL" and "Bcl-2" and NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/08 12:01
S12	11	"Bcl-XL" and "Bcl-2" same NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/08 13:12
S13	581	"Bcl-XL" or "Bcl-2" same NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/08 13:13
S14	25	"Bcl-2" same NMR	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/09 10:29
S15	37	bcl-2 and BH3 same antibody	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/09 10:30
S16	5	"190965".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2004/11/10 10:56

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TI   Methods and compounds useful to induce apoptosis in cancer cells

L3   ANSWER 2 OF 31  CAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
TI   An inhibitor of Bcl-2 family proteins induces
     regression of solid tumours
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L3 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
TI Conversion of apoptotic proteins

L3 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
TI Solution structure of Bcl-w determined by **NMR** spectrometry and its use for screening and design of interacting compounds

L3 ANSWER 5 OF 31 MEDLINE on STN
TI Characterization of protein-ligand interactions by high-resolution solid-state **NMR** spectroscopy.

L3 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN
TI Solution Conformations of Wild-Type and Mutated Bak BH3 Peptides via Dynamical Conformational Sampling and Implication to Their Binding to Antiapoptotic **Bcl-2** Proteins

L3 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI Rational design and real time, in-cell detection of the proapoptotic activity of a novel compound targeting **Bcl-XL**

L3 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
TI Small-molecule inhibitors of **Bcl-2** protein

L3 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
TI Structural studies of apoptosis and ion transport regulatory proteins in membranes

L3 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
TI Defining the p53 DNA-binding domain/**Bcl-xL**-binding interface using **NMR**

L3 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
TI Solution Structure of Human BCL-w: Modulation of Ligand Binding by the C-Terminal Helix

L3 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7
TI Cancer Prevention by Tea Polyphenols Is Linked to Their Direct Inhibition of Antiapoptotic **Bcl-2**-Family Proteins

L3 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
TI Discovery, Characterization, and Structure-Activity Relationships Studies of Proapoptotic Polyphenols Targeting B-Cell Lymphocyte/Leukemia-2 Proteins

L3 ANSWER 14 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
TI Solution Structure of the BHRF1 Protein From Epstein-Barr Virus, a Homolog of Human **Bcl-2**

L3 ANSWER 15 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Novel chemically-stabilized helices of the **BCL-2** family induce apoptosis of leukemia cells.

L3 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI A Novel Approach for Characterizing Protein Ligand Complexes: Molecular Basis for Specificity of Small-Molecule **Bcl-2** Inhibitors

L3 ANSWER 17 OF 31 MEDLINE on STN DUPLICATE 11
TI Enhanced resistance to salt, cold and wound stresses by overproduction of animal cell death suppressors **Bcl-xL** and Ced-9 in tobacco cells - their possible contribution through improved function of organella.

L3 ANSWER 18 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI A view to a kill: Ligands for **Bcl-2** family proteins.

L3 ANSWER 19 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Identification of small molecular inhibitors of BH3 and **Bcl-xL** interaction.

L3 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
TI Discovery of Small-Molecule Inhibitors of **Bcl-2** through Structure-Based Computer Screening

=> d ti 21-38

L3 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 13
TI Solution structure of the antiapoptotic protein **bcl-2**

L3 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14
TI Identification of small-molecule inhibitors of interaction between the BH3 domain and **Bcl-XL**

L3 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
TI **NMR** Studies of the Anti-Apoptotic Protein **Bcl-xL** in Micelles

L3 ANSWER 24 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Privileged molecules for protein binding identified from **NMR**-based screening.

L3 ANSWER 25 OF 31 MEDLINE on STN DUPLICATE 16
TI Rationale for **Bcl-xL**/Bad peptide complex formation from structure, mutagenesis, and biophysical studies.

L3 ANSWER 26 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Targeting the mitochondrial redox state of leukemia and lymphoma cells with PK11195 for effective therapy.

L3 ANSWER 27 OF 31 MEDLINE on STN DUPLICATE 17
TI An approach for high-throughput structure determination of proteins by **NMR** spectroscopy.

L3 ANSWER 28 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Assessing pore formation by **BCL-2** during apoptosis in cell lines and human leukemic cells: Cysteine 158 in the alpha 5 helical loop is in an aqueous environment.

L3 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 18
TI Refolding, Purification, and Characterization of a Loop Deletion Mutant of Human **Bcl-2** from Bacterial Inclusion Bodies

L3 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 19
TI Recombinant mouse **Bcl-2**(1-203). Two domains connected by a long protease-sensitive linker

L3 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 20
TI X-ray and **NMR** structure of human **Bcl-xL**, an inhibitor of programmed cell death

=> d ab bib 2, 7, 8, 10, 18, 23, 31

L3 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AB Proteins in the **Bcl-2** family are central regulators of programmed cell death, and members that inhibit apoptosis, such as **Bcl-XL** and **Bcl-2**, are overexpressed in many cancers and contribute to tumor initiation, progression and resistance to therapy. **Bcl-XL** expression correlates with chemo-resistance of tumor cell lines, and redns. in **Bcl-2** increase sensitivity to anticancer drugs and enhance in vivo survival. The development of inhibitors of these proteins as potential anticancer therapeutics has been previously explored, but obtaining potent small-mol. inhibitors has proved difficult owing to the necessity of targeting a protein-protein interaction. Here, using **NMR**-based screening, parallel synthesis and structure-based design, the authors have discovered ABT-737, a small-mol. inhibitor of the antiapoptotic proteins **Bcl-2**, **Bcl-XL** and Bcl-w, with an affinity two to three orders of magnitude more potent than previously reported compds. Mechanistic studies reveal that ABT-737 does not directly initiate the apoptotic process, but enhances the effects of death signals, displaying synergistic cytotoxicity with chemotherapeutics and radiation. ABT-737 exhibits single-agent-mechanism-based killing of cells from lymphoma and small-cell lung carcinoma lines, as well as primary patient-derived cells, and in animal models, ABT-737 improves survival, causes regression of established tumors, and produces cures in a high percentage of the mice.
AN 2005:467373 CAPLUS
TI An inhibitor of **Bcl-2** family proteins induces regression of solid tumours
AU Oltersdorf, Tilman; Elmore, Steven W.; Shoemaker, Alexander R.; Armstrong, Robert C.; Augeri, David J.; Belli, Barbara A.; Bruncko, Milan; Deckwerth, Thomas L.; Dinges, Jurgen; Hajduk, Philip J.; Joseph, Mary K.; Kitada, Shinichi; Korsmeyer, Stanley J.; Kunzer, Aaron R.; Letai, Anthony; Li, Chi; Mitten, Michael J.; Nettesheim, David G.; Ng, Shi Chung; Nimmer, Paul M.; O'Connor, Jacqueline M.; Oleksijew, Anatol; Petros, Andrew M.; Reed, John C.; Shen, Wang; Tahir, Stephen K.; Thompson, Craig B.; Tomaselli, Kevin J.; Wang, Baole; Wendt, Michael D.; Zhang, Haichao; Fesik, Stephen W.; Rosenberg, Saul H.
CS Idun Pharmaceuticals, San Diego, CA, 92121, USA
SO Nature (London, United Kingdom) (2005), 435(7042), 677-681
CODEN: NATUAS; ISSN: 0028-0836
PB Nature Publishing Group
DT Journal
LA English
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
AB Antiapoptotic **Bcl-2**-family proteins **Bcl-2** and **Bcl-XL** have been recently validated as drug discovery targets for cancer. Here, by using a combination of mol. modeling, **NMR**-based structural anal., fluorescence polarization assays, and cell-based assays, we have designed and characterized a novel proapoptotic compound targeting these proteins. Our compound, Apogossypol, is capable of binding and inhibiting **Bcl-2** and **Bcl-XL** with high affinity and induces apoptosis of tumor cell lines. Mechanistic studies on the action of our compound were also performed via confocal microscopy that provided real-time detection of the interaction with **Bcl-XL** in intact cells. Finally, preliminary data on cells freshly isolated from patients affected by chronic lymphocytic leukemia strongly suggest potential applications of **Bcl-2** antagonists as chemosensitizers in cancer therapy.
AN 2004:261470 CAPLUS
DN 141:133679

TI Rational design and real time, in-cell detection of the proapoptotic activity of a novel compound targeting **Bcl-XL**
AU Becattini, Barbara; Kitada, Shinichi; Leone, Marilisa; Monosov, Edward; Chandler, Sharon; Zhai, Dayong; Kipps, Thomas J.; Reed, John C.; Pellecchia, Maurizio
CS The Burnham Institute, La Jolla, CA, 92037, USA
SO Chemistry & Biology (2004), 11(3), 389-395
CODEN: CBOLE2; ISSN: 1074-5521
PB Cell Press
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
AB A review. Approaches to drug discovery are varied and range from high-resolution **NMR** solution structure of targeted mols. to rational design. This review is focused on the use of small-mol. inhibitors of **Bcl-2** as therapeutic agents. Members of the **Bcl-2** family of proteins are crucial regulators of apoptotic cell death. Human cancers have been found to over-express **Bcl-2** and **Bcl-XL**. Cells with high levels of these antiapoptotic mols. are usually resistant to a wide spectrum of chemotherapeutic drugs. Targeting the **Bcl-2** family of proteins with small-mol. inhibitors has therefore become an attractive potential therapy for a variety of cancers. The role of **Bcl-2** in sabotaging the success of cytotoxic agents suggests that novel treatments should be devised to target **Bcl-2**-over-expressing tumor cells and induce apoptosis directly. In this article, we will provide a review of potential small-mol. inhibitors as anticancer agents. The de-regulated over-expression of **Bcl-2** and **Bcl-XL** is directly related to cancer cell survival and resistance to chemotherapeutic drugs, making antagonists or inhibitors of these proteins very promising candidates for use in cancer therapy.
AN 2004:545110 CAPLUS
DN 142:16057
TI Small-molecule inhibitors of **Bcl-2** protein
AU Pulley, Heather; Mohammad, Ramzi
CS Division of Hematology and Oncology, Department of Internal Medicine/Karmanos Cancer Institute, Wayne State University School of Medicine, Detroit, MI, 48201, USA
SO Drugs of the Future (2004), 29(4), 369-381
CODEN: DRFUD4; ISSN: 0377-8282
PB Prous Science
DT Journal; General Review
LA English

L3 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
AB P53 exerts its tumor suppressor activity through both transcription-dependent and transcription-independent processes. Although the transcription-dependent activity of p53 has been extensively studied, the mechanism for transcription-independent p53-mediated tumor suppression is less well known. Recently, it was reported that p53 can directly induce mitochondrial permeabilization and promote apoptosis. This occurs through complexation of the DNA-binding region of p53 with the anti-apoptotic proteins **Bcl-xL** and **Bcl-2** (Mihara, M. et al. (2003) Mol. Cell 11, 577-590). Using **NMR** spectroscopy we show that the interaction surface on p53 involves the same region that is used by the protein to contact DNA. The p53-binding site on **Bcl-xL** consists of the carboxy-terminus of the first α-helix, the loop between α3 and α4, and the loop between α5 and α6 of **Bcl-xL**. Furthermore, the interaction of p53 with **Bcl-xL** is blocked by the

binding of a 25-residue peptide derived from the BH3 region of the pro-apoptotic protein referred to as Bad.

AN 2004:114202 CAPLUS

DN 140:266453

TI Defining the p53 DNA-binding domain/**Bcl-xL**-binding interface using **NMR**

AU Petros, Andrew M.; Gunasekera, Angelo; Xu, Nan; Olejniczak, Edward T.; Fesik, Stephen W.

CS Global Pharmaceutical Research and Development, Abbott Laboratories, Abbott Park, IL, 60064, USA

SO FEBS Letters (2004), 559(1-3), 171-174
CODEN: FEBLAL; ISSN: 0014-5793

PB Elsevier Science B.V.

DT Journal

LA English

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L3 ANSWER 18 OF 31 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

AN 2002:500148 BIOSIS

DN PREV200200500148

TI A view to a kill: Ligands for **Bcl-2** family proteins.

AU Rutledge, Stacey E. [Reprint author]; Chin, Jason W.; Schepartz, Alanna [Reprint author]

CS Department of Chemistry, Yale University, PO Box 208107, New Haven, CT, 06520-8107, USA

SO Current Opinion in Chemical Biology, (August, 2002) Vol. 6, No. 4, pp. 479-485. print.
ISSN: 1367-5931.

DT Article
General Review; (Literature Review)

LA English

ED Entered STN: 25 Sep 2002
Last Updated on STN: 25 Sep 2002

L3 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15

AB The **Bcl-2** family of proteins play a pivotal role in the regulation of programmed cell death. One of the postulated mechanisms for the function of these proteins involves the formation of ion channels in membranes. As a first step to structurally characterize these proteins in a membrane environment, we investigated the structure of a **Bcl-xL** mutant protein when incorporated into small detergent micelles. This form of **Bcl-xL** lacks the loop (residues 49-88) between helix 1 and helix 2 and the putative C-terminal transmembrane helix (residues 214-237). Below the critical micelle concentration (CMC), **Bcl-xL** binds detergents in the hydrophobic groove that binds to pro-apoptotic proteins. However, above the CMC, **Bcl-xL** undergoes a dramatic conformational change. Using **NMR** methods, we characterized the secondary structure of **Bcl-xL** in the micelle-bound form. Like **Bcl-xL** in aqueous solution, the structure of the protein when dissolved in dodecylphosphocholine (DPC) micelles consists of several α-helixes separated by loops. However, the length and position of the individual helixes of **Bcl-xL** in micelles differ from those in aqueous solution The location of **Bcl-xL** within the micelle was examined from the anal. of protein-detergent NOEs and limited proteolysis. In addition, the mobility of the micelle-bound form of **Bcl-xL** was investigated from **NMR** relaxation measurements. On the basis of these studies, a model is proposed for the structure, dynamics, and location of **Bcl-xL** in micelles. In this model, **Bcl-xL** has a loosely packed, dynamic structure in micelles, with helixes 1 and 6 and possibly helix 5 partially buried in

the hydrophobic interior of the micelle. Other parts of the protein are located near the surface or on the outside of the micelle.

AN 2000:567804 CAPLUS
DN 133:292518
TI **NMR** Studies of the Anti-Apoptotic Protein **Bcl-xL** in Micelles
AU Losonczi, Judit A.; Olejniczak, Edward T.; Betz, Stephen F.; Harlan, John E.; Mack, Jamey; Fesik, Stephen W.
CS Pharmaceutical Discovery Division, Abbott Laboratories, Abbott Park, IL, 60064, USA
SO Biochemistry (2000), 39(36), 11024-11033
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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AB The **Bcl-2** family of proteins regulate programmed cell death by an unknown mechanism. Here we describe the crystal and solution structures of a **Bcl-2** family member, **Bcl-xL**. The structures consist of two central, primarily hydrophobic α-helixes, which are surrounded by amphipathic helixes. A 60-residue loop connecting helixes α1 and α2 was found to be flexible and non-essential for anti-apoptotic activity. The three functionally important **Bcl-2** homol. regions (BH1, BH2 and BH3) are in close spatial proximity and form an elongated hydrophobic cleft that may represent the binding site for other **Bcl-2** family members. The arrangement of the α-helixes in **Bcl-xL** is reminiscent fo the membrane translocation domain of bacterial toxins, in particular diphtheria toxin and the colicins. The structural similarity may provide a clue to the mechanism of action of the **Bcl-2** family of proteins.

AN 1996:317544 CAPLUS
DN 125:3874
TI X-ray and **NMR** structure of human **Bcl-xL**, an inhibitor of programmed cell death
AU Muchmore, Steven W.; Sattler, Michael; Liang, Heng; Meadows, Robert P.; Harlan, John E.; Yoon, Ho; Nettesheim, David; Chang, Brian S.; Thompson, Craig B.; et al.
CS NMR Research, Abbott Laboratories, Abbott Park, IL, 60064, USA
SO Nature (London) (1996), 381(6580), 335-341
CODEN: NATUAS; ISSN: 0028-0836
PB Macmillan Magazines
DT Journal
LA English